

CHICAGO OFFICE,
40 La Salle Street.



MILWAUKEE OFFICE,
124 Grand Avenue.

Published by
HARRISON CAWKER.

VOL. 24, No. 5. MILWAUKEE AND CHICAGO, MARCH., 1888.

TERMS: \$1.00 a Year in Advance
Single Copies, 10 Cents.

THE RELIANCE PURIFIER

IS GUARANTEED TO BE

The Best Machine for Purifying Middlings Ever Offered to Millers.

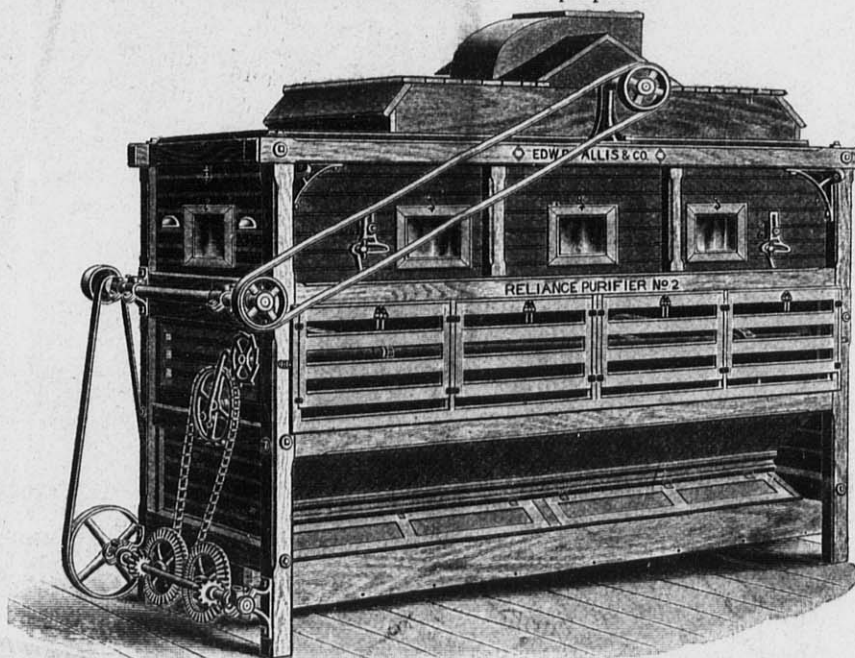
You cannot afford to use antiquated machines for purifying, which were devised in early days, and are not adapted to the high standard of modern milling, when you can obtain such a machine as this, which is far ahead of anything ever offered on the market for the purpose.

PERFECT
IN CONSTRUCTION!

IMPROVED
CLOTH CLEANING
DEVICE!

HANDSOME
IN APPEARANCE!

NEW
PATENT CONVEYOR!



WE GUARANTEE RESULTS AND CLAIM THE BEST PURIFIER ON EARTH.

WRITE FOR DESCRIPTIVE PAMPHLET TO

EDW. P. ALLIS & CO.

Builders of complete Flouring Mills on the Allis system. Manufacturers of the Celebrated Gray Patent Noiseless Roller Mills, Round Reels, Centrifugals and every appliance for modern mills. Dealers in Flour Mill Supplies of every description.

RELIANCE WORKS, - MILWAUKEE, WIS.

"GOLD SEAL" RUBBER BELTING,



OAK TANNED LEATHER BELTING.

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PURIFICATION OF MIDDINGS.

THE · GARDEN · CITY · PURIFIER !

◁ OVER 5000 IN USE. ▷

The Machine that makes no Big Challenges but Gets There all the same.

WITH perfect confidence in our PURIFIER we offer it without hesitation, well knowing the thorough work it can do. No Machine for the purpose can beat it, and but few mills, custom large or small it has no competition. Millers cannot afford to run without Purifiers, yet many to-day are so doing, and thereby are literally throwing money away, for this Machine is a money saver. A Purifier should do perfect work. Our Machine does. A Purifier should be simple in construction, and easy to handle. We have this in ours. A Purifier should be so arranged that the cloths can be changed at a moments notice. We do this. A Purifier should have no conveyors, as conveyors always pulverize or flour more or less of the middlings, which is detrimental and wasteful. A Purifier should have no returns but do clean work, right along, grade as well as purify. Ours is the only machine that will do it. These facts we vouch for. Now then, if you are in need of a first-class Purifier, write us for descriptive circular. We will make prices satisfactory and guarantee the machines to be and to do all we claim.

✱ GARDEN CITY MILL FURNISHING CO., ✱
CHICAGO, ILL.

The United States Miller

Published by
E. HARRISON CAWKER.

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OUR WHEAT CLEANING SYSTEM.

At the request of many millers I hereby outline what comprises a wheat cleaning system that cannot be surpassed.

It should have, besides the machines here shown, a wheat heater, to keep the temperature of the wheat even throughout the year. A cockle machine and oat extractor are often necessary.

SEPARATOR.

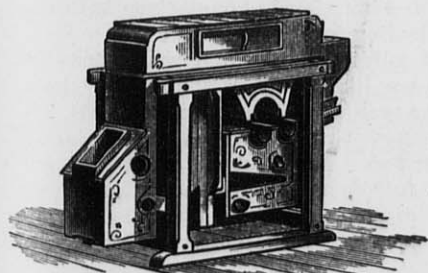


Fig. I.

Fig. I. requires no explanation. The great majority of Separators offered are good, and millers have their prejudices in favor of some particular one.

ROLLING SCREEN.



Fig. II.

The next machine that I would recommend is a large Rolling Screen, Fig. II. This is one of the best of cleaners, and I will say right here that it is a better cleaner than most of the Smutters that do their work with beaters or on scouring surfaces of iron.

SMUTTER AND SCOURER.

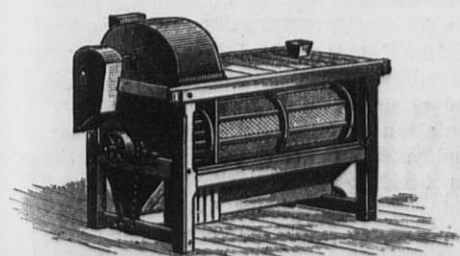


Fig. III.

Fig. III represents the Garden City Smutter and Scourer, the principles of which are

totally different from any other. The scouring parts of this machine consist of sapphire (which is a high grade specie of corundum) and an outer case of perforated steel. The work is done by the revolving action of the sapphire cylinder on the wheat, and is wholly by friction.

The work accomplished by the machine is such that the beards or fuzz on the grains are thoroughly removed, as well as the thin skin of bran on the germ end, thereby leaving that detrimental portion so exposed as to be easily removed.

BRUSH MACHINE.

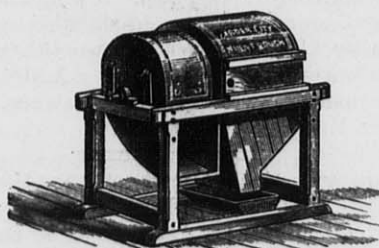


Fig. IV.

A wheat Brush Finisher, Fig. IV, while not always a necessity, unless where the very best results are desired, is nevertheless a great advantage, and pays for itself.

1ST BREAK.

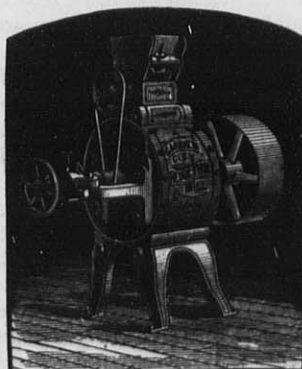


Fig. V.

We next come to the 1st Break, or Wheat Splitting Machine, Fig. V., and can say for even and thorough work the Garden City is so far ahead of all other machines for the purpose, and is so well and favorably known that comment is unnecessary.

WIRE SCALPER.



Fig. VI.

Fig. VI is an ordinary scalper to follow the first break. A good size machine will be preferable, so as to make a good clean separation, and remove the loose material, and also doing considerable cleaning on that part of the bran that was concealed before the splitting operation took place.

BRUSH SCALPER.

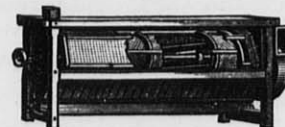


Fig. VII.

Fig. VII is the Garden City Brush Scalper. By this machine the split wheat receives another scouring and brushing, as well as aspirating, and at the same time a perfect separation is made.

If millers comply with this outline of cleaning their wheat, I can truthfully say they have started on the right path, no matter what system they choose to operate on. Even burr millers will be astonished at the change it will make in their output.

I would call particular attention to the Brush Scalper, as I consider this machine and the process the *king of all*. Experts claim that the minute amount of crease dirt in each grain is so small that not much damage can be done to the flour by leaving it in. But when it is considered that it takes upwards of 4,000,000 grains of wheat to make a barrel of flour, it must certainly exercise considerable influence on the color. I would also state that the product of this Brush Scalper, even after the wheat has been thoroughly treated on the ordinary scalper, is much darker than the first break flour. Will experts please explain this? Another question, why do millers who do not use this process of cleaning split wheat, make so much low grade flour?

LOUIS GATHMANN.

Chicago, Ill.

UNITED STATES MILLER.

E. HARRISON CAWKER, EDITOR.

PUBLISHED MONTHLY.

OFFICE, NO. 124 GRAND AVENUE, MILWAUKEE.

SUBSCRIPTION PRICE—PER YEAR, IN ADVANCE.

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For estimates for advertising, address the UNITED STATES MILLER.

[Entered at the Post Office at Milwaukee, Wis., as mail matter of the second-class.]

MILWAUKEE & CHICAGO, MARCH, 1888.

We respectfully request our readers when they write to persons or firms advertising in this paper, to mention that their advertisement was seen in the UNITED STATES MILLER. You will thereby oblige not only this paper, but the advertisers.

S. H. SEAMANS, Esq., Secretary of the Miller's National Association, makes the following announcement:

The date for the Annual Convention Millers' National Association at Buffalo is fixed for Tuesday, Wednesday and Thursday, June 12th, 13th and 14th, German Music Hall. Head-quarters, Genesee Hotel.

THE Jonathan Mills Manufacturing Co., with a capital of \$50,000, has been incorporated at Cleveland, O., for the purpose of manufacturing and selling machines invented by Jonathan Mills, the well-known milling engineer, and others.

MEMBERS of the Philadelphia Commercial Exchange have laid before the Inter-State Commerce Commission, charges that several railroad lines were making discrimination in favor of some shippers by under-billing freight.

A THROUGH RATE where part of the railroads are in the United States and part in Canada as well as a through export rate to Europe are matters which the Inter-State Commerce Commission find difficult to adjust. As it is now, a through rate can be made if railroads and steamship lines agree to carry wheat or flour to Liverpool for the same price as charged to carry it to New York, Philadelphia, Baltimore or Boston.

J. R. SIMPSON, Huntingdon, Pa., Sec'y of the Pennsylvania Millers' Insurance Co., reports for the first year, business policies to the amount of \$357,850 at a cost to the insured of only \$2,332.15. Fortunately there were no losses during the year.

THE president of a large cement manufactory has recently asked the U. S. MILLER if any cement factory, was successfully using rolls for reducing, instead of stones. We do not know, in fact we know little concerning that branch of the grinding trade. Perhaps some of our readers can give us some information on the subject.

PUBLIC opinion seems to be growing constantly more and more unfavorable to the use of lightning rods. Few people now-a-

days have confidence in them. Perhaps the over-eloquent lightning-rod peddler has done more to hasten the conclusion than anything else. The time for thunder and lightning storms is fast approaching and lightning has a way of its own for striking and has been known to pass harmlessly over an unpretentious dramshop and "knock to smithereens" the lightning-rod protected and costly steeple of the fashionable sanctuary.

A FEW persons are yet trying to invent a bran-packer that will be practical. The last heard from was in Gloucester, England. A great number of models and drawings of bran-packers have been filed in the office of the Secretary of the Millers' National Association in Milwaukee, but none have so far been considered really worth putting on the market. The trouble seems to be not in packing in the required space but in keeping it packed.

NOTICE TO MILLERS AND ELEVATOR OWNERS.

SAMPLE COPIES of this number of THE UNITED STATES MILLER are sent to a large number of flour mill and elevator owners, etc., throughout the United States and Canada from the list as given in *Cawker's American Flour Mill and Elevator Directory*. If there is any mistake in the address, such as style of firm, spelling of name or anything else, please write us stating the correct address. It is worth a good deal to any miller, big or little, to be correctly represented. It would be best to send your business card and also to state capacity, kind of power used, whether stones or rollers or both are used, etc. Address all communications to E. Harrison Cawker, Publisher, Milwaukee, Wis.

THE subscription price of the UNITED STATES MILLER is only ONE DOLLAR per year. Now is your time to *get on the list*. During the year there are going to be lots of "ups and downs" and "ins and outs" and "things wise and otherwise" that will be first chronicled in the columns of this paper, even if it don't come out but once a month.

OFFICIAL ANNOUNCEMENT.

THE annual convention of the Millers' National Association will be held in the German Music Hall at Buffalo, Tuesday, Wednesday and Thursday, June 12, 13 and 14, 1888. This will be a mass convention. All merchant millers, regardless of membership, are invited. The reforms contemplated will be presented to the convention by prominent committees, in shape to be discussed understandingly. All matters of general interest pertaining to the milling industry, will come before the convention for discussion. Invitations have been extended to representative bodies interested in the flour trade in Europe to send delegates, and assurances have been received that a liberal number will accept. This is intended to be a business convention of business men, for the purpose of reforming abuses, and improving the methods now existing for doing the business, and adopting such regulations as may be advantageous and for the general good. Our Buffalo friends assure us a hearty welcome, and the arrangements they contemplate for the pleasure and comfort of visitors will be appreciated by all. Milwaukee, March 1888.

S. H. SEAMANS, Sec'y.

WE are pained to learn that the old veteran Judge Loomis, so well known in the trade as the agent of leading millbuilding and furnishing houses, has after months of illness been transferred to the St. Vincent Hospital for the Insane, in St. Louis, and is now pronounced to be in a dying condition. For two generations he has served in his useful capacity and it may truly be said of him "there might be better men, but there are not."

THE demand for barrels for flour is constantly decreasing. Sacks take the place of barrels quite satisfactorily. It seems to be only a question of time when the barrel will have "to go" almost entirely. An empty flour barrel generally finds its way into the cook stove, but the empty sack is always handy to have about.

Now that some of the Philadelphia bakers have been sent to prison for giving a nice rich color to their cakes, rolls, buns, etc., with that delightful lead-poison yclept *chrome yellow*, perhaps the critical portion of the public will cease talking about adulterations of flour with talc and alum by millers. Few and far between have been adulterations of the latter sort which, if practiced, might be considered harmless in comparison with the death dealing lead poison. We like to see a critical public and when it really finds an abuse, we like to see it "down it" in a vigorous manner. If the canned goods, jellies, preserves, pickles, spices and dozens of other things that might be mentioned are kept as free from injurious and fraudulent adulterations as American flour then ought we all to be happy, contented and long-lived.

BRADSTREET'S says that "The consumption of wheat in the United Kingdom for the last two years, according to English authorities, has not been at the normal average of 5½ bushels per capita. The population of Europe increased from 289,000,000 in 1860 to 347,000,000 in 1886, or rather more than 20 per cent. in 26 years, or less than 1 per cent. annually. When consumption is normal and industries are prosperous the consumption of wheat should be augmented at least 1 per cent. annually."

THE directors of the Peoria (Ill.) Board of Trade recently adopted the following resolution, and request all other Boards of Trade and U. S. Senators and Members of Congress to aid in securing the passage of a bill containing the desired relief:

Resolved, That it is the opinion of this Board that the Interstate Commerce law should be so amended as to require all railroads engaged in Interstate Commerce to issue all bills of lading for exact amount of grain loaded in cars, and to deliver the same amount at destination.

OUR "E. C." *Millstone*, has for some time printed a department for the edification of readers, under the caption of "The Liar," in emulation of the example set by another, in the days when chestnuts were green. Under this heading in the March number the saddest prevarication strikes us as the following: "I have found your journal to be of great interest and am much pleased with it. —Levi Cox"—Wonder how Cox (if there be such person) feels in the face of the accusation—whether he attributes it to editorial modesty or misplaced confidence?

THE annual meeting of the Indiana Millers' Association will be held in the Capitol building, Indianapolis, Ind., May 8, 1888. The programme is laid out for a three days' session, and it is thought that there will be a rousing meeting. Several valuable papers will be read for the edification of visitors.

SCRIBNER'S MAGAZINE will at once commence the publication of a series of illustrated articles on RAILROADS.

THE *Milling World* advises millers suffering from what it calls the "miller's cold in the head" to syringe out the nasal passages once or twice a day with warm weak brine. Did the editor of the *Milling World* ever try the remedy? We know he is not a miller, but then did he ever try it? We did *once*,—just once, no more—some years ago, after reading the advice in some infernal agricultural paper and when we finished the delectable performance and recovered our senses we were sincerely thankful that our nose was still left. It may possibly do for a common, tough-skinned, double dyed-in-the-wool, oak-tanned every-day miller, but we know it will never do for editors with noses of the Grecian cut. Go, my brother, and put thine own nose in brine before advertising it for others use.

THE Millers of St. Louis and the Missouri Millers' Association are vigorously trying to bring the Southern Railway and Steamship Association to make as reasonable concessions as eastern rivals have done, *i. e.*—to grant equal rates on wheat, and flour in barrels or sacks. They present strong and unanswerable arguments in favor of their demands, which we have no doubt will be granted in the near future. The millers present the following interesting example of discrimination:

ST. LOUIS	GRAIN.	BBL. FLOUR.	SACK FLOUR.
to	32c.	68c.	38c.
ATLANTA.			
Against Bbl. Flour as compared with Wheat....	4c.		
" Sack " " " " " Bbls.	8c.		
" Sack " " " " " Wheat	12c.		
	per bbl.		

It is needless to say, that such discriminations are unjust and unreasonable.

ONCE in a while the newspaper man finds an expression that consoles him in a measure for the great amount of labor which he has to perform, much of which is unappreciated by the public. For instance, the eminent Robert Collyer said, "I believe that a good newspaper is as sacred in its own way as the Bible. It has something in it of the very present word of God to man, and the very present word of man to God."

THE Canadian Pacific Railroad has proved to be totally unable to carry Manitoba wheat and flour to market in reasonable time. Perhaps they are too busy carrying Minneapolis flour. Ogilvie's mill in Winnipeg, and others in different parts of the province, are reported shut down for this reason and the trade is brought to a standstill for the time being. The farmers, warehouse men and millers speak in terms anything but complimentary to the road. It has been called the most outrageous railroad monopoly on this continent. If half the charges are true the managers of the road must be kept pretty busy in listening to the complaints of the suffering public or

damning their "bloody" impudence for daring to complain. The provincial residents have this consolation, however, when they can bear their burden no longer, they are welcome to come down from their hyperborean regions and earn and enjoy an honest living in Uncle Sam's domains, where people have rights which railroads are *glad* to respect.

MILWAUKEE ITEMS.

A HUGE traveling, hoisting crane, weighing about twenty tons, in the shop of E. P. Allis & Co., suddenly gave away and fell, killing the crane operator and badly injuring another employee. The crane itself, valued at about \$10,000, is almost a total loss.

MILWAUKEE mills are all doing a good fair business. Some of them have orders on hand now sufficient to keep them running constantly to June 1. Margins are close, but on the whole, little grumbling is heard.

MILWAUKEE boss bakers have recently held a meeting and decided to establish the following retail prices, May 1:

A doz. rolls (3 lbs. of dough).....	10c
The same to the trade.....	8c
A loaf of wheat bread (2½ lbs. of dough).....	10c
A loaf of rye bread (2¼ lbs. of dough).....	8c
A loaf of rye bread (3½ lbs. of dough).....	10c

These prices represent a raise of 2 cents all around, the weight remaining nominally the same. However, the light weights said they had been using 2½ pounds of dough right along for a dozen of rolls, and they wouldn't use any more hereafter. One of the heavy weights replied that their rolls must be about the size of doughnuts. Other speakers said that each baker must use his own discretion as to weight; while the west siders were getting a 4½ pound loaf of rye bread for 10 cents, the south siders got a loaf that weighed a pound less. The west siders, too, were partial to big rolls, and of course they must be satisfied. It was said that there were bakers in the city who did not hesitate to sell a dozen rolls for 6 and 6½ cents. These very same men, it was predicted, would cut under rates by giving fifteen or sixteen rolls for a dozen.

We have been favored with calls during the past month from the following gentlemen, well known to the trade:

Simeon Howes, Esq., of Silver Creek, N. Y.
Mr. Louis E. Barbeau, London, Eng., Manager of British and Colonial business of Howes & Elwell of Silver Creek, N. Y.
M. Geo. J. Teitjen, representing Wilford & Northway, Minneapolis, Minn.
S. H. Seamans, Esq., Secretary of the Millers' National Association, Milwaukee.
Mr. W. J. Turner, of *The Northwestern Miller*, Minneapolis, Minn.
Col. T. P. Rundlett, Chicago, Ill.

THE *Master Steam Fitter* gives the following rule for finding the superficial feet of steam-pipe required to heat any building with steam: One superficial foot of steam-pipe to six superficial feet of glass in the windows, or one superficial foot of steam pipe for every hundred square feet of wall, roof or ceiling, or one square foot of steam pipe to eighty cubic feet of space. One cubic foot of boiler is required for every fifteen hundred cubic feet of space to be warmed. One horse power boiler is sufficient for forty thousand cubic feet of space. Five cubic feet of steam, at seventy-five pounds pressure to the square inch, weighs one pound avoirdupois.

CAWKER'S AMERICAN FLOUR MILL AND ELEVATOR DIRECTORY FOR 1888, issued March 3, is meeting with much praise from all departments of the trade. While not claimed by the publisher to be perfect, it answers FULLY the requirements of the trade. It is the only list published. The demand is limited and the price (Ten Dollars per copy) is cheap, considering the labor required in compiling, printing and selling. It contains lists of flour mill and grain elevator owners, miscellaneous kinds of mills such as corn, rye, oatmeal, rice and feed mills, millwrights, flour brokers and dealers in various sections of the United States and Canada, and a good list of European flour and grain importers. Kind of power used, rolls or stones, capacity and millers supposed to be worth \$10,000 or more are indicated in thousands of cases.

THE CONVENTION OF 1888.

The official announcement of the Millers' Convention for 1888 at Buffalo, is made elsewhere and we have not the slightest doubt but it will have a greater attendance than any half dozen of the previous conventions together. We are sure that Buffalo citizens will do all in their power to make the visit to their city on that occasion, pleasant and long to be remembered. It will be worth all it will cost any miller to attend, in the sights he will see and the things he will learn by inspecting the mills, elevators, manufacturing, transportation facilities and methods of Buffalo business men. The best posted men in the country will learn *something*, and the miller from the rural districts by keeping his eyes open and listening and asking a pertinent question now and then will learn "*a heap*." We have private information which we are not at liberty yet to divulge that something will be presented to the inspection of visiting millers that will create as much wonder, surprise and enthusiasm as the letting loose of a 10-pound skyrocket would among a tribe of savages.

There is a great deal to be done of the utmost importance to the trade in cereals and cereal products in this country and Europe. A delegation, and quite probably a large one, representing European flour and grain factors will be present and all matters that can be adjusted, will be. We say to the millers of this country, big and little, turn out and go to the Buffalo convention in June. We advise the small millers especially to be on hand for the big ones will certainly be there and where the big miller can pick up a *square meal*, it will be a cold day indeed if the little miller can't get a *mighty good lunch*.

HOWES & EWELL, of Silver Creek, N. Y., manufacturers of the well known Eureka grain cleaning machinery, have again captured a notable prize, viz.: gold medal diploma, at the Toulouse exposition, recently held at Toulouse, France. The regularity with which the machinery of this firm carries off prizes at foreign expositions, speaks well for the skill of American workmen as well as for the high degree of excellence possessed by the manufactures of this old established firm.

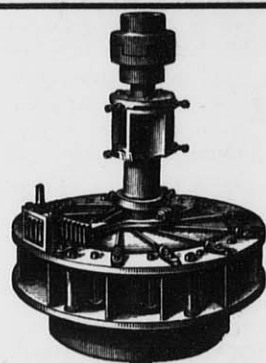
THE STANDARD OF EXCELLENCE EVERYWHERE

EUREKA

GRAIN CLEANING MACHINERY OVER 24,000 IN USE

BUILT ONLY BY HOWES & EWELL SILVER CREEK N.Y.





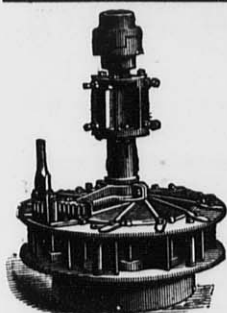
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Fine New Pamphlet for 1887.

The "OLD RELIABLE" with Improvements, making it the Most Perfect Turbine now in use, comprising the Largest and the Smallest Wheels, under both the Highest and Lowest Heads in this country. Our new Pocket Wheel Book sent free. Address,

JAMES LEFFEL & CO., Springfield, Ohio,
and 110 Liberty St., New York City.

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POOLE & HUNT'S Leffel Turbine Water Wheel

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Machine Molded Mill Gearing

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Mixers and General Outfit for Fertilizer Works.

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THE HARRISON CONVEYOR.



Clean Work. No Mixing of Grain.

FOR HANDLING

Grain, Coal, Sand, Clay, Tan-Bark, Ores, Wet, Dry or Crown Malt, Seeds, Shavings, Sawdust, Lime, Hair, Cement, Cotton Seed, etc., etc.

Write for Catalogue and Grain Dealers' Ready Reckoner.

BORDEN, SELLECK & CO., General Agents,

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is the original round cornered Elevator Bucket and its shape is broadly covered by a foundation patent.

All buckets of the same shape, though produced by a different process, trespass upon our rights, and render dealers and users as well as manufacturers liable for damages.

AVOID INFRINGEMENTS.

All legitimate "Salem" Buckets are plainly marked with the word SALEM.

W. J. CLARK & CO., Sole Manufacturers, SALEM, OHIO.

THORNBURGH & GLESSNER, Gen'l Agents, CHICAGO.



LESS THAN ONE CENT A DAY

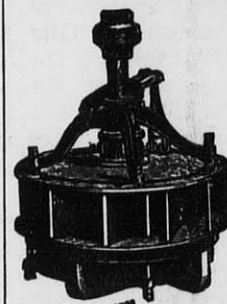
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Improved + Walsh + Double + Turbine



This wheel has a perfect fitting cylinder gate and draft tube combined, and allows no water to escape when closed.

POWER GUARANTEED

equal to any wheel on the market using equal amount of water. Address for particulars,

B. H. & J. SANFORD,

Phoenix Iron Works,
Sheboygan Falls, Wis.

GANZ & CO.

Budapest, Austria-Hungary.

We are the first introducers of the Chilled Iron Rollers for milling purposes, and hold Letters Patent for the United States of America. For full particulars address as above.

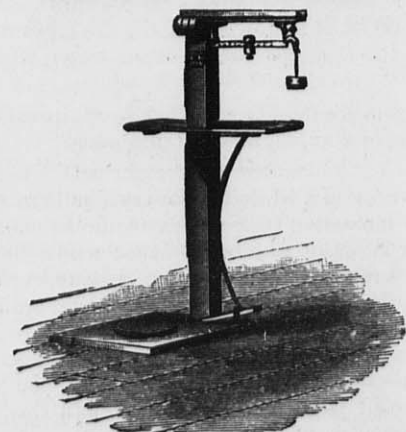
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If you want to know anything about

Southern California

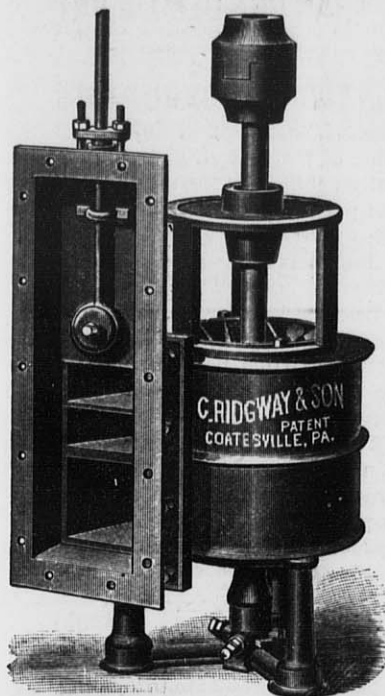
Send for THE GOLDEN ERA MAGAZINE, filled with descriptions and illustrations. Send 10 cents for sample copy. \$3.00 per year. THE GOLDEN ERA CO., San Diego, Cal.

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ALL KINDS OF MILL AND ELEVATOR SCALES.

THE "PERFECTION" IS KING!



85 Per Cent. at { HALF GATE,
THREE QUARTER GATE,
FULL GATE, } We Guarantee 80 Per Cent.

SAVES ALL COST OF PENSTOCK.

Light Gate! Extreme Simplicity! No Clogging! Dozen Other Virtues!

TO GOOD TO BE TRUE, EH!

Well, you don't pay for it till it does all we say in your own mill before your own eyes. Remember that!

BEATS ANY OVERSHOT EVER BUILT.

Because it gives same high percentage at part as at full gate, and is the only Water Wheel in the world that does so. Besides its Perfectly Tight Gate, Absolutely Tight.

DON'T BUY AN ENGINE AND BOILER To help out your failing water power in dry times until you properly improve the water power with this magnificent Water Wheel which gives you a high percentage when water is low. The "PERFECTION" often **SAVES THE NECESSITY OF STEAM POWER.**

INVESTIGATE THIS WHEEL.

It costs nothing to write us and get our Circulars and learn our terms of sale. We save you money and IMPROVE your power.

IF WE DON'T, YOU DON'T PAY US, THAT'S ALL.

Besides, Besides, Besides, Besides, we will also agree to set the "Perfection" beside or in place of your present wheel, and if we don't beat it (not EQUAL, mark you, but BEAT it) will give you the Perfection for nothing. Isn't that fair?

CRAIG RIDGWAY & SON, 16 GREEN STREET, COATESVILLE, PA.

FLOUR EXPORT RULES.

The following are the general regulations governing Export Sales of Flour, adopted by members of the MILLERS' NATIONAL ASSOCIATION of the U. S. A., and are made a part of the Code Conditions upon which basis all sales must hereafter be conducted.*

LIABILITY FOR DELAYS IN TRANSIT.—In case of c. i. f. sales, the MILLER OR SHIPPER having contracted the freight with a regular line, having regular advertised sailings, and having delivered the flour to the forwarding agent within the contract time, shall be free from all liability arising from delay in transit.

INSURANCE.—Insurance on flour sold on c. i. f. terms to be not less than 10 per cent. above the net invoice value. Any marine loss on c. i. f. sales will act as a release to the seller on that contract or so much of it as is included in the shipment to which the loss occurs, and the seller shall not be obliged to replace any of said shipment by reason of the sale being made on c. i. f. terms.

INSURANCE ON CONSIGNMENTS shall not be less than 10 per cent. in excess of draft or bill of exchange against the same.

Insurance money collected from marine loss on consignment shall pay:

1. The draft against consignment.
2. A reasonable commission, not to exceed 1½ per cent. for the consignee.
3. The balance shall belong and revert to the consignor.

CLAIMS ARISING FROM INFERIOR QUALITY.—If a flour shipment is not up in quality to

the type sample, but comes near enough to be considered a "fair tender," the purchaser is obliged to accept the shipment at purchase price less the actual difference in quality.

Flour consigned for sale when once sold by the consignee and delivered to the buyer, must release the shipper from further liability as to quality, condition or price. The custom now prevailing in some European ports of allowing purchasers to return flour on various pretexts, more or less time after delivery, is unjust to the shipper, and contrary to sound business principles.

SALES of consigned flour, made in regular form and so reported to the consignor, shall be final. We shall not recognize the arbitrary right exercised in some ports by the purchaser releasing himself at his own convenience of a bargain on "next market day," or at any other time.

BILLS OF LADING to ports which have no regular steamship connection with the United States, shall be considered *through bills* if made to principal ports with the reshipment clause inserted.

*The Telegraphic Cipher Code referred to is published by the Riverside Printing Company, Milwaukee, Wis.

Communication from J. A. McNulty of the Hazel-tine Mill Furnishing Co., Minneapolis, Minn.
Manufacturers of the Celebrated Roller Mill Feeders.

In the management of Flour Mills much is saved in carefully looking after the machinery, and always having the proper kind to carry out the different

reductions, separations, &c. Many well equipped mills are weak in some particular branch which does not seem to cut a very great figure, but which does in fact amount to a great loss in a year's run. These weaknesses are not always the fault of the miller, as he as a rule knows all the weak points in his plant, and as a rule would provide remedies at once if the proprietors were satisfied with the expense necessary to provide the necessary machine or thing. Millers soon learn to know the kind of men they work for. Some proprietors have more liking for a miller who never asks for new machinery; their millers naturally do not ask for any they can in any way get along without. Other proprietors wish their millers to be trying all the new machines offered that have any plausible showing of bettering their condition. This class of mill proprietors are the ones that you will find at the front. You will find them selling flour when there is any selling. Why? Because their flour is up to the standard. Their mills are supplied with the very best machinery, tested in their own mill, on their own wheat, this is the proper method of buying machinery. Try it first, then buy if the machinery suits your requirements, do not buy on the recommendation of a friend who is milling in another state, on different wheat and for a different market, but buy what you have found to be the best suited to your own particular work. If mill furnishers will not let you try their machinery before buying, give them the go-by and find others that will. Mill proprietors do not always know the actual wants of their millers. Not because the miller does not know what he wants, but because he dislikes to ask for the thing needed. This is particularly the case when milling is dull. The miller hesitates to ask for needed machinery, knowing the proprietor is not feeling well able to buy. I think it would be for the best interests of both miller and proprietor to speak freely. The miller to have less reserve in speaking of things needed. The proprietor should encourage the miller to be frank in stating what could be used to benefit the mill. Oft times this procedure would bring about changes and improvements that would make a losing mill a paying one.

FOREIGN NOTES.

THE increase in custom duties on cereals imported into Germany is as follows for 220.5 pounds: Wheat from 71 to \$1 19; rye from 71 to \$1 19; oats from 35½ to 95 cents; Buck-wheat from 23½ to 47.6 cents; pulse from 23½ to 47.6 cents; barley from 35½ to 53½ cents; Indian corn from 23½ to 47.6; toilet powders, starch, gluten, arrowroot and sago substitutes and tapioca from \$2 14 to \$2 97; vermicelli and macaroni from \$2 28 to \$3 21; mill products of grain and pulse from \$1 78½ to \$1 49.

THERE are, according to the latest official report, in New Zealand, 121 flouring mills, 47 using steam power; 6 steam and water; 66 water, and 1 wind mill. These mills employ 448 persons. The total value of mill property is placed at about \$1,500,000.

IN England distress is growing almost intolerable among the working classes. There are 14,500,000 persons whose wages are less than \$2 50 per week, and there are 7,000,000 people who are classed as paupers—that is, supported wholly or in part at public expense. It is proposed to encourage emigration by paying the whole or part of the passage money to English colonies out of the public treasury.

A great many of the best flouring mills in Great Britain are reported shut down or running only on short time. Too much American flour and too little American wheat seems to be at the bottom of their troubles.

Mackenzie & Sons mill at Montrose, Scotland, burned Feb. 14. Loss, £10,000; well insured.

AUSTRALIAN millers are paying 82 cents per bushel for their new wheat crop.

WE clip the three following items from *The Millers' Gazette* (London):

Uruguay with its 450,000 inhabitants, has adopted a sliding scale for its grain import duties. When wheat is worth 35s. per 480lbs., the duty is 11s. per qr.; when 35s. to 43s.9d. it is 8s.9d.; 43s.9d. to 52s.6d., 6s.6d.; 52s.6d. to 61s.3d., 1s. per qr. Above 61s.3d. wheat is admitted free. On flour the duty varies from 27½ per cent. *ad valorem* when the price is 16s.6d. to 20s. per sack, down to 7½ per cent. when the price is 42s. per sack.

The export trade in flour from South Australia during 1887, although it only embraced 156 tons to Europe, underwent a large increase compared with 1886, the total exports being 66,482 tons, against 43,000. New South Wales, which took 20,901 tons, and Queensland with 24,826 tons, were the best customers. With a surplus of wheat this year of 400,000 to 500,000 tons, it is to be expected that Australian millers will have a busy season—although unless they can reduce their prices considerably, they cannot hope to compete with America in the English markets.

IRISH PORT DUES ON IMPORTED FLOUR.—The Limerick Harbor Commissioners, at a special meeting held on Thursday last, decided by a majority of three to two—two members not voting—to impose a tax of 2s. per ton (3d. per sack) on foreign flour shipped direct to the port, which is the amount stated in the bill being promoted in parliament for the revision of the Limerick harbor dues. In Dublin and Waterford there is no charge on imported foreign flour, while in Cork and Galway it is 1s. per ton.

CUTTING BELT HOLES.

Experienced millwrights should have a rule or system for cutting the belt-holes through floors without ripping up the floors, or literally "cutting and trying." In no mechanical job is there more temptation to use "cut and try" method than in cutting belt-holes, but this tendency is only because of a lack of knowledge. The laying out and cutting of belt-holes is one of the simplest processes, whether the belt is to run on pulleys of the same diameter or of varying diameters, whether the belt runs vertically through the floor or at an angle, and whether the belt runs on parallel shaft or on those placed at right angles. This last is known as the "quarter-turn" belt, and cutting the holes for it without mangling the floor, is generally considered a difficult job. It is not so, but is quite as simple as cutting for belts to run on parallel shafts.

When the two shafts to be connected are on a vertical line, and the two pulleys are of the same diameter, it is, of course only necessary to drop a plumb-line from the faces of the upper pulley to the floor. When, however, the pulleys are of differing diameters, or when the two shafts are of differing distances from the wall or any common upright, measurements must be taken as to the actual distance of each pulley from one common upright, as the wall of the building. Then the height of the pulley on the upper floor from the floor; then the thickness of the floor; and lastly the distance of the pulley in the room below from the ceiling.

These data had best be put upon paper, on a scale, for convenience of reference, and then reproduced to size on the door; or if the doors are encumbered, the measurements may be laid out on the floor itself. To illustrate, suppose the upper shaft to carry a fourteen-inch pulley, and is thirty inches from the wall and nine feet above the floor. The lines of position of pulley can be made on the floor, ascertained by a plumb-line. The other (lower) shaft is twenty-four inches from the ceiling, six feet from the wall, and the pulley is twenty-four inches diameter. Allow for the additional thickness of the floor, and lay out the lines on the upper floor.

It will be seen that lines drawn from two points fourteen inches apart to two points twenty-four inches apart represent the two pulleys and their belt. Now, across these lines at the angle formed by the distance of the upper pulley from the wall and the distance of the lower pulley from the wall, draw a line representing the floor—or two lines representing the ceiling and floor. The distances of nine feet (the pulley above the floor) and twenty-four inches (the pulley under the floor), with the thickness of the floor, will give the space that separates the two shafts, if one is directly over the other. This distance must be preserved on the angle or incline represented by the difference of distances from the wall (thirty inches from seventy-two inches), forty-two inches.

If this verbal explanation is not clear let the reader follow it with pencil and paper to scale. It is plain that where the inclined lines touch the top of the lines made for the floor, and where they intersect the lower side of the lines made for the ceiling, are the points where the boring must be made.

The same plumbing for quarter-turn belts is necessary to ascertain the positions of the pulleys relatively to floor and ceiling. It may

be noted that the driving side of these quarter-turn belts is perpendicular; the faces of the pulleys coincide in a vertical line. In the case of this class of belts, the holes through the floor must be wider than the thickness of the belt, as it is turned at an angle. For the driving side of the belt, drop a plumb line. For the other side, take the measurement of distance of pulleys from floor, and the outside of the pulley faces. Lay these faces out on the floor (the diameters of the pulleys, one a circle and the other line, as they are at right angles) and draw lines between (two lines to represent the width of the belt). These lines must be at the distances from point to point represented by the distances of the pulleys from floor and ceiling. Then cross these lines with those for the floor, and the points for boring are shown as above. These measurements ought always to be put on paper, making a diagram to scale; the work is then palpably or demonstratively before the workman.—*The Engineer* (London).

WOULD IT NOT BE WELL FOR MILLERS,

To pay particular attention to keeping their entire mill and machinery *always* clean and in perfect order?

To have smooth, hardwood floors especially on the grinding floor?

To insure their mills in their own mutual insurance companies?

To join their State Association and if they have no State Association to join the National Association first and then get a few other wide-awake millers in the state to get together and organize a State Association?

To study carefully all the merits and demerits of the long and short systems of milling with rolls and stones?

To put in a steam-engine of the very best pattern made if you are troubled with a lack of water-power four or five months a year?

To make up your mind if you have a little old-fashioned mill that has not paid expenses and a reasonable profit for four or five years, to quit the business and turn the mill into some other kind of factory which *will* pay in your neighborhood?

To consider well, if you have got the money to remodel with, whether your location is as desirable a one as can be found for a mill?

To think about 1759 times, if by any means you get out of the milling business, before concluding to jump into it again?

To study up the subject of bolting in a thorough manner and determine whether your old-fashioned bolting chests can profitably compete with modern bolting machines?

To learn to distinguish the qualities of bolting cloth so as not to be imposed upon by irresponsible dealers?

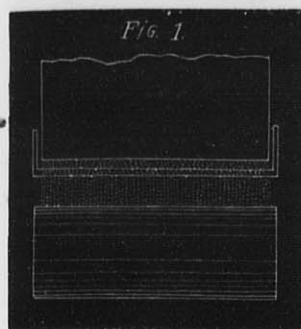
To learn to distinguish between good lubricating oil and "poor to middlin'?"

To invest the value of two barrels of your best flour every year in milling, mechanical and commercial newspapers?

To convince yourself that you *need* a machine before you buy it, and to be sure you will have the money to pay for it when the bill comes around?

To learn to clean grain enough and not too much?

To study the science of profitably disposing of your mill products, which is the real object of running a mill anyhow?



Uniform Sheet as fed by our
McAnulty Automatic Force Feeders

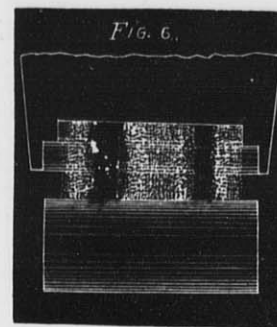
CAPACITY INCREASED 10 TO 20 PER CENT.—See Sidle, Fletcher, Holmes & Co.'s Letter
PATENTS INCREASED 4 PER CENT.—See Galaxy Mill Co.'s Letter.

HASELTINE · MILL · FURNISHING · CO.,

MINNEAPOLIS, MINN.,

MANUFACTURERS OF

McANULTY'S



Irregular Sheet as fed by the
Feed Roll with Automatic Gate

Automatic Force Feeders!

McANULTY'S 1ST BREAK REGULATING FEEDERS AND DISTRIBUTORS.

OUR GUARANTEE Is to increase capacity of full Roller Mills 10 to 20 per cent. To save from 3 to 8 lbs. of wheat per barrel of flour manufactured. To increase patents 2 to 5 per cent. without requiring additional power.

Fills Your Guarantee of 20 Per Cent. Increased Capacity

From SIDLE, FLETCHER, HOLMES & Co.,
Minneapolis.

Your Force Feeders fill your guarantee to increase the capacity 20 per cent. as your system enables us to treat our sixth Brake stock better with four double Allis mills than we formerly could with five double Allis mills.

Please arrange your system on our "Red Dog" Stock.

TEN MORE.

Fills a Guarantee to Increase Patents 4 Per Cent.

From GALAXY MILL CO.,

A. C. LORING, Manager.

They have enabled us to increase our patents 4 per cent. Our grades are improved, our clean-up and yields materially bettered. Please deliver us ten more.

MARISSA ROLLER MILLS,
Marissa, Ill., March 7th, 1888.

Enclosed please find draft for \$100.00, to cover bill of January 28th, 1888. We have never put anything in the mill which has given as much satisfaction in operating as these Feeders, bought from your Mr. Clark. I hope you will have good success in future with them.

MEEK, FINGER & CO., Props.

Sedalia, Mo., February 27, 1888.

I am now using McAnulty's Automatic Force Feeders, and I can say that it is the finest feeder ever manufactured, and I have used a number of different automatic feeders. I am now taking out the Craig and putting in the above feeders. The McAnulty's have no superior, nor can they be any more perfect.

B. S. REMBAUGH.

Millersburg, O., Feb. 18, 1888.

We have your system of Feeders on our Rolls throughout our mill, and can safely say there is no

Feeder made to equal the McAnulty on any and all kinds of Stock, from first brake to the softest low grade. We also have one of your Feeders on our Corn and Feed Roll, which surprised us when we got it to work. It increased the capacity and gives us an even feed the whole length of the roll. We are more than pleased with them.

MAXWELL, HECKER & POMERINE.

Office of THE TERRELL MILLING CO.,
Terrell, Texas, July 14th, 1887.

Hazeltine Mill Furnishing Co., Minneapolis, Minn.
Gentlemen:—The McAnulty Force Feeder shipped us has arrived all right, and we are well pleased with it. You can ship us the following order: Five (5) Feeders, to be used on 9x18 Double Stevens Roller Mills, speed 400, diameter of shafts 2". One (1) Feeder same as above, with roll shaft 2". Fit First Brake with your Weighting Regulator. Please ship at once, and greatly oblige,

TERRELL MILLING CO.

A. J. Childers, Pres.; T. M. Kell, Sec'y;
E. J. Lockhead, Supt.

NEWS.

CLOSED UP.—Duluth Roller Mills, Duluth, Minn.

BURNED.—La Crosse Milling Co.'s feed mill at La Crosse, Wis.

ANOTHER large elevator is to be built in Duluth this year.

BURNED.—Feb. 29, Hawley Bros'. Phoenix Mill at South Bend, Ind.

T. M. NEAL is building a mill at Prescott, Ark. W. Henk at Middlebrook, Va.

APPELMANN BROS., Chatham, Ky., are rebuilding their mill burned some time ago.

BURNED.—Duelle & Williams mill at Sandusky, O., burned recently. Loss, \$35,000.

F. S. HEATH, Corry, Pa., succeeds Lippold & Heath, dealers in engines, shellers, etc.

THE Tecumseh (Neb.) water power roller mill will be ready to run in about 60 days.

VARIOUS points in Dakota are working like beavers to secure the erection of roller mills.

GEO. RALL & Co., a small milling concern at Fond du Lac, Wis., have made an assignment.

E. P. ALLIS & Co. have the order for Cameron & Tatum's 500-bbl. roller mill at Ft. Worth, Tex.

LAKE grain and ore carriers look for a fair business this year, but not for any very great profits.

BURNED.—J. H. Johnson's mill at Belle Plaine, Minn., is burned. Loss, \$16,000; insurance, \$6,500.

THE Seyk Mill Co., Kewaunee, Wis., will soon have a 150-bbl. roller mill, steam power. E. P. Allis & Co. have the contract.

BURNED.—The Union Flour Mills, Detwitt, Mich., were recently damaged \$31,000 by fire. Fully insured. Will be refitted at once.

BURNED.—J. C. Williams' mill at Davisville, N. Y.; loss \$16,000; insurance very light. Lempke & Van Doren's mill at Millard, Neb.

AT Larimore, Dak., March 16, the 200-barrel roller mill was burned, with the warehouse, elevator and

35,000 bushels of wheat. Loss \$65,000; insured for \$42,000.

GEO. T. SMITH ESQ., of the Geo. T. Smith Middlings Purifier Co., will sail for Europe soon to look after extensive business interests there.

GREEN BAY, Wis., will soon give a most excellent modern roller mill. Straubel & Ebeling are preparing to entirely remodel and increase capacity.

THE headquarters of the Farmers' Alliance of Dakota are at Aberdeen, Dak. The company will soon build a number of elevators and warehouses.

New coal and flour docks of great magnitude are to be erected at Gladstone, Mich., to accommodate the increased traffic caused by the "Soo Line" of Railroad.

THE Farmers' Alliance of Dakota and Minnesota propose to build a line of elevators of their own. H. L. Loucks, St. Paul, Minn., is president of the organization.

J. A. HINDS & Co. and Davis & Son will soon rebuild their mills at Rochester, N. Y. The Stilwell & Bierce Mfg. Co. have the Davis contract for the Granite mill.

THE Geo. T. Smith Middlings Purifier Co. have taken the contract for building a 150-bbl. roller mill at Dennison, Tex., also a 200-bbl. roller mill at Gainesville, Tex.

THE Mount Vernon Milling Co.'s mill at Mount Vernon, Ill., was damaged to the amount of \$10,000 by the cyclone in February. It is being rebuilt and will soon be in operation again.

NIAGARA Falls Hydraulic Motor and Power Company, of Chicago and New York, has been incorporated. Capital stock, \$15,000,000; to build a plant on Niagara Falls to convert the falling water into power. Incorporators, Dr. K. Morgner and others.

ENGINEERS are building an immense dam at San Francisco, which will be of concrete, 700 feet long, built between two rocky bluffs. It will be 170 feet high, and built on a curve, having a radius of 637 feet. It will be larger than the Quaker Bridge dam at New York.

THE Fox River Valley Millers' Association has its headquarters at Appleton, Wis. S. R. Willy, of Appleton, is president; B. F. Smith, Depere, vice-president; F. J. Lachman, secretary, Neenah, and E. N. Holbrook, treasurer, Menasha. The association is making quiet, but vigorous, movements to improve the traffic rates given to millers in the Fox River valley.

GEO. V. HECKER, the great New York City miller, is dead. His name was known in almost every household in the land. He built up a great business and left an untarnished reputation. He was 70 years of age at the time of his death. He leaves a family consisting of a widow, three daughters and a son, Geo. V. Hecker, who has long been associated with his father in business.

THE flour output of the St. Louis mills during the year 1887 was 1,985,717 barrels, against 1,807,956 in the preceding year, and 1,841,529 barrels in 1885. The amount manufactured by mills outside the city owned by citizens of St. Louis was 910,327 barrels in 1887 and 787,412 in 1886. City mills produced 497,991 barrels of corn meal, 64,987 barrels of hominy and grits, and 3,736 barrels of rye flour.

A FEW figures will serve to show the value to Minneapolis flour shippers of the new C. P. R. route through Canada, and also the value of this carrying trade to the C. P. R. Company. Minneapolis last year turned out 9,375,250 barrels of flour, of which 2,522,030 barrels were exported. A very large proportion of the balance was shipped to Boston and the New England States. The distance from Minneapolis to Boston via Sault Ste. Marie is 1,400 miles; via Chicago and Albany 1,559. The distance from Minneapolis to Liverpool via Montreal is 3,947 miles, and via New York 4,463 miles. If the United States authorities do not adopt the example set them by the Dominion Government and refuse bonding privileges to shippers over the Canadian route, the Minneapolis people and those of the C. P. R. will have cause for congratulation in such a mutually profitable arrangement.—Dominion Mechanical and Milling News.

NO OTHER RAILWAY IN THE NORTHWEST

has in so short a period gained the reputation and popularity enjoyed by the **WISCONSIN CENTRAL LINE**. From a comparatively unknown factor in the commercial world, it has been transformed to an independent, influential, grand **Through Route**, with magnificent depots, superb equipment and unsurpassed terminal facilities. Through careful catering to details, it has won for itself a reputation for solidity, safety, convenience and attention to its patrons, second to no railroad in the country. **Pullman** sleepers, models of palatial comfort, dining cars in which the cuisine and general appointments are up to the highest standard, and coaches especially built for this route, are among the chief elements which have contributed towards catering successfully to a discriminating public. Located directly on its line, between **Chicago and Milwaukee**, and **St. Paul and Minneapolis**, and **Chicago and Ashland and Duluth**, are the following thriving cities of Wisconsin and Michigan: **Burlington, Waukesha, Fond du Lac, Oshkosh, Neenah, Menasha, Stevens Point, Chippewa Falls, Eau Claire, New Richmond, Hurley, Wis., Ironwood, Mich., and Bessemer, Mich.**

For details, information, lowest current rates, berths, etc., via this route, to any point in the **Northwest**, apply to nearest Ticket Agent, or address

WM. S. MELLEN, JAMES BARKER,
General Manager. Gen'l. Passr. & Ticket Agt.
MILWAUKEE.

COLUMBUS BUGGY COMPANY,

COLUMBUS, OHIO,

- - Manufacturers of FIRST-CLASS - -

Buggies, Surreys

PHAETONS,
Park Wagons, Light Carriages.

Our work is fully Guaranteed and absolutely reliable.

BEST FOR LIVERY SERVICE! FOR FAMILY SERVICE! FOR PLEASURE DRIVING

POINTS OF SUPERIORITY:

Superior Material and Workmanship, Fine in Finish, Easy in Riding Qualities, Light in Draft,

Unsurpassed in Durability,

Cheapest for Quality of Goods in the World.



Owens and operates nearly 5,650 miles of thoroughly equipped road in Illinois, Wisconsin, Iowa, Missouri, Minnesota and Dakota.

It is the Best Direct Route between all principal points in the Northwest, Southwest and Far West.

For maps, time tables, rates of passage and freight, etc., apply to the nearest station agent of the CHICAGO, MILWAUKEE & ST. PAUL RAILWAY, or to any Railroad Agent anywhere in the World.

R. MILLER, General Manager.
A. V. H. CARPENTER, Gen'l Pass. and Tkt. Agt.
J. F. TUCKER, Ass't Gen'l Manager.
GEO. H. HEAFFORD, Ass't Gen'l Pass. and Tkt. Agt.
MILWAUKEE, WISCONSIN.

For information in reference to Lands and Towns owned by the CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, write to H. G. HAUGAN, Land Commissioner, Milwaukee, Wisconsin.

THE CHICAGO AND NORTH-WESTERN RAILWAY.

Penetrates the Centres of Population in
ILLINOIS, IOWA,
WISCONSIN,
MICHIGAN,
MINNESOTA,
DAKOTA,
NEBRASKA AND WYOMING.

Its **TRAIN SERVICE** is carefully arranged to meet requirements of local travel, as well as to furnish the most attractive routes for through travel between important

TRADE CENTRES.

Its **EQUIPMENT** of Day and Parlor Cars, Dining and Palace Sleeping Cars is without rival.

Its **ROAD-BED** is perfection, of stone-ballasted Steel.

The North-Western is the favorite route for the Commercial Traveler, the Tourist and the Seekers after New Homes in the Golden Northwest.

Detailed information cheerfully furnished by

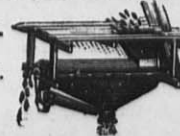
JNO. S. GEORGE, Commercial Agent, Milwaukee, Wis.
MARVIN HUGHITT, Vice-Prest and Gen'l Manager.
H. C. WICKER, Traffic Manager.
E. P. WILSON, Gen'l Passenger Agent.

"TRIUMPH" CORN SHELDER

CAPACITY
2000 BUSHELS PER DAY.

Shells wet or dry corn.
CHEAPEST AND BEST SHELDER.

PAIGE MANUF'G CO.,
No. 12 Fourth St., Painesville,
[Please mention this paper when you write to us.]



ASHLAND M.L.S.&W.RY. ROUTE

The Milwaukee, Lake Shore & Western Railway has been well named the Fishing and Hunting Line of Wisconsin, passing, as it does, through thousands of acres of but partially explored woods and within easy reaching distance of lakes and streams that have never been fished by white men, all well stocked with the game fish for which Northern Wisconsin waters are noted. The woods abound with game: deer, bear, wolf, mink, beaver, pheasant, and other game are quite plentiful.

THE ONLY LINE

From Milwaukee to the new Iron Mining District in Wisconsin and Michigan that reaches ALL of the developed Mining towns: **GOGEBIC, WAKEFIELD, BESSEMER, IRONWOOD AND HURLEY.**

Direct line to **ASHLAND AND DULUTH.**
Sleeping cars between **ASHLAND AND CHICAGO.**
The **GUIDE BOOK**, and other descriptive matter, containing full information, maps and engravings of the country traversed by the line, will be sent to any address on application to the General Passenger Agent.

CHAS. L. RYDER, Gen. Agent, 105 Washington St., Chicago.

City ticket office, 62 Clark St., Chicago.
Chicago Depot, Cor. Wells and Kinzie Streets, (C. & N. W. R'y.)

City ticket office, 102 Wisconsin St., Milwaukee.

F. WHITCOMB, Gen'l Manager.
CHAS. V. MCKINLAY, Gen'l Pass. Agent.

MILWAUKEE WIS.

Milwaukee & Northern R. R.

SHORT LINE

BETWEEN

CHICAGO, MILWAUKEE,
Menasha, Neenah, Appleton,
Depere, Green Bay, Ft. Howard,
Marinette, Menominee,
IRON MOUNTAIN.

3 EXPRESS TRAINS DAILY
EACH WAY
BETWEEN
Chicago, Milwaukee,
Appleton and Green Bay.

2 EXPRESS TRAINS DAILY
EACH WAY
BETWEEN
CHICAGO, MILWAUKEE,
Menominee and Iron Mountain.

Elegant Pullman Palace Sleeping Cars on all Night Trains.

CONNECTIONS.

At Milwaukee, in New Passenger Station with C. M. & St. Paul R'y and Wisconsin Central Line.
At Plymouth, with C. & N. W. R'y for Sheboygan, etc.

At Menasha, with W. C. Line.

At Neenah, with W. C. Line.

At Appleton, with M., L. S. & W. R'y and C. & N. W. R'y.

At Forest Junction, with M., L. S. & W. R'y.

At Green Bay and Ft. Howard, with G. B. W. & St. P. R. and Stage and Boat for Sturgeon Bay.

At Oconto Junction, with M., L. S. & W. R'y for Oconto.

At Menominee, with C. & N. W. R'y.

At Iron Mountain, with C. & N. W. R'y.

G. F. DUTTON, General Supt.
W. B. SHEARDOWN, Gen'l Ticket Agent.

1888.

CAWKER'S

1888.

AMERICAN FLOUR MILL AND ELEVATOR DIRECTORY.

* FOR 1888 (COPYRIGHTED) *

IS NOW READY FOR DELIVERY. This Directory is far more complete than any of the five preceding ones. Our long experience has taught us the wants of the trade, and we have used our best endeavors to meet them. The principal features are as follows:

- 1.—List of Flour Mill owners of the United States and Dominion of Canada, with Post Office address, County and State, and when information is obtained, the capacity in barrels of flour per day of 24 hours, kind of power used (steam or water), roller or stone system.
- 2.—Lists of Corn, Oatmeal, Rice, Feed Mills, etc.

- 3.—List of Grain Elevators and Warehouses.
- 4.—List of Millwrights.
- 5.—List of prominent American Flour and Grain Brokers.
- 6.—List of Foreign Flour and Grain Importers.
- 7.—List of Mill Furnishers, etc.
- 8.—Statistics valuable to the Trade.

9.—Millers whom we believe to be worth Ten Thousand Dollars or more will be indicated.

This directory gives the address of 16,062 Flour Mills in the United States and 1,634 in the Dominion of Canada. The additional lists of Feed, Corn, Barley, Oatmeal and Rice Mills, Elevators and Warehouses, Millwrights, Flour and Grain Brokers, Importers, etc., adds to the number of addresses several thousand. The COUNTIES are included in the address, and in cities, the street and number in most instances. We have had valuable aid in compiling this work from Secretaries of Boards of Trade, of Bureaus of Labor Statistics and Manufactures, from Railroad and Steamship Companies, from the milling and commercial press generally, and from mill and grain elevator owners themselves. That the work is perfect, we do not claim, for in the nature of things that is an impossibility, but as it is, it is indispensable to all desiring to reach the flour and grain trade of this country, and is well worth the price asked. The total number of addresses contained in this volume is 22,827.

Price of Directory, \$10 per copy, post paid to any address.

If desired Directory will be sent by express C. O. D. Remit by Express or by Exchange on New York, Chicago or Milwaukee, or Post Office or Express Money Order. Address,

E. HARRISON CAWKER, PUBLISHER,

No. 124 Grand Avenue,

MILWAUKEE, WIS.

1888 Edition, just out, March 1, 1888, revised, amended and added to, to meet all the requirements suggested by the members of the Millers' National Association, who use more copies of this Code, than of all others combined.

PRIVATE TELEGRAPHIC CIPHER

CODE

COMPILED EXPRESSLY FOR THE USE OF

MILLERS, FLOUR AND GRAIN BROKERS,

For Private Telegraphic Correspondence, either
for Land or Cable Lines.

This CODE has been approved and is used by the best firms in America and Europe. It contains Flour Tables, Bran Tables, Middlings Tables, Flour Grades and Brands, Time of Shipment, Dates, Names of Places, American Currency, Sterling Quotations, Table on Limits, etc., Drawing, Credits, etc., and Shipments on Joint Account, Miscellaneous, Market Upwards, Market Downwards, Insurance, Shipping and Freight, Shipping by Regular Lines of Steamers, Finance, Bankers' Names, Standing of Firms, Telegraphing, Advances, Commission, Stocks and Crops, Weather, Samples and Quality, Equivalent of Sacks in Barrel Quantities, Commission Tables, Interest Tables, Equivalent Flour Prices in Currency, Sterling, Francs, Guilders, and Marks, Comparative Tables, Sack and Barrel Flour, Ocean Freight Rates (Comparative Table), Sailings from Sea board (Table), Key to Sailings from Seaboard Table, Foreign Weights and Measures, etc.

We respectfully refer to the following well-known firms: S. H. Seamans (Empire Mills), Sec'y of the Millers' National Association; E. Sanderson & Co. (Phoenix Mills), Milwaukee, Wis.; Daisy Roller Mills, Milwaukee, Wis.; Nunemacher & Co. (Star Mills), Milwaukee, Wis.; Roots & Co., (Millers), Cincinnati, O.; C. H. Seybt, (Miller), Highland, Ill.; Kosmack & Co., (Flour Brokers), Glasgow, Scotland; J. F. Imbs & Co. (Millers), St. Louis, Mo.; E. Schraudenbach, Okau- chee Roller Mills, Wis.; Winona Mill Co., Winona, Minn.; Herrick, Kirk & Co., New York; Acme Milling Co., Indianapolis, Ind.; W. H. Jones, New Brighton, Eng.; Chas. Kreutziger, Heidelberg; Wm.

Paddock & Co., Terre Haute, Ind.; Mandon Roller Mill Co.; L. R. Finch's Sons, New York; Jupiter Mills, Milwaukee; Morse & Sammis, Minneapolis, Minn.; Faust, Kraus & Co., Milwaukee; American Starch Co., Columbus, Ind.; Rudolph & Herne, Liverpool, Eng.; Cleveland Milling Co., Cleveland, O.; Zinkelsen B. & Co.; Albion Milling Co., Indianapolis; Norton Milling Co., Chicago; Norris & Carruthers, Montreal; Nelson Milling Co., Evansville; Valier & Spies Milling Co., Marine, Ill.; J. S. Hillyer; Gilchrist & Bros., Glasgow, Scotland; David Wright, Chicago; Crain & Baird, Montreal; H. D. Porteous & Co., Liverpool, Eng.; Aultman & Taylor Co.; John H. Peacock, Minneapolis, Minn.; Eckhardt & Swan, Chicago; E. H. Seybt, Highland, Mich.; A. W. Howard, Minneapolis, Stock, Hillsdale, Mich.; Albion Milling Co., Mich.; F. W. Minn.; C. Hoffman & Son, Enterprise, Kas.; Reif- Huber Co., Chicago; Spink Bros., Toronto, Can.; Mr Le Duc, City; Chas. Tiedeman, O'Fallon, Ill.; Hurins, Sons & Co., Cincinnati, O.; G. Montague & Co., Chicago; Phoenix Mill Co., Davenport, Ia.; Blanton, Watson & Co., Indianapolis, Ind.; Porter Milling Co., Winona; T. & A. B. Snider, German Mills, Ont.; Jenks & Mering; Richardson & Evans; Sidle, Fletcher & Co.; Comstock & Co.; L. T. Bronson; Mannegold & Son; Farquhar Bros.; Central Milling Co.; Watson & Farr; Globe Milling Co.; Geo. Teleson & Co.; L. Hurd; N. W. Miller; Wright & Hardie; Tolleson Com. Co., Atlanta; Yaeger Flour Mill Co.; Thos. Todd & Son; Ripon Roller Mills; Schoellkopf & Matthews; W. Trow & Co.; St. Paul Roller Mill Co.; and many others.

ADDRESS

THE RIVERSIDE PRINTING CO.,

124 GRAND AVENUE,

MILWAUKEE, WIS., U. S. A.

A NEW USE FOR ROLLERS.

Rollers have revolutionized the milling industry throughout the greater portion of the civilized world and now they are commencing to revolutionize the manufacture of plate glass. The labor of the cylinder blower and glass grinder is to be dispensed with entirely. The new system is now in operation successfully in Belgium and will no doubt soon be introduced here if it is as successful and economical as it is claimed to be. A foreign contemporary thus describes it:

At the Besson glass works (Belgium) a series of rollers have been placed between the tank furnace and the annealing ovens and leers. Through these rolls, similar to sheet mill rolls in iron mills, the molten glass is conducted on to a cooling table by means of a sluice or canal from the tank furnace, the mouth of which is opened and closed at the will of the operator, much the same as the flow of liquid steel is controlled in the ladle used to fill the ingot molds in Bessemer steel manufacture. From this table the glass passes through the sheet rolls, and, after being rolled to the desired thickness (which can be regulated by powerful screws, same as in iron mills) the sheet is conveyed on rollers between two large cylinders, where it is divided into required lengths by means of an ingenious shearing apparatus. All this is done before the sheet cools sufficiently to lose plasticity, and it is thence conveyed by means of rollers (much the same as those now used to convey steel rails from their rolls to the stretchers) to the annealing leer. No human hand touches the glass, and labor compared with the machines used is but a vanishing quantity.

A WEEKLY journal styled "*Invention*," published at 54 Fleet st., London, E. C., is worthy of the patronage of prominent American inventors. A copy of it should be seen to be fully appreciated and we presume the publishers would forward a sample copy free upon application. We might say by the way that *Invention* gives much attention to American patents.

PUBLICATIONS RECEIVED.

THE March *Wide Awake* gives a delightful chapter of Sidney Lusk's serial story "My Uncle Flormond"—the good humor and good heart of the two noble Jews, Mr. Finkelstein and Mr. Marks, have seldom been surpassed. Mrs. John Sherwood's etiquette-serial "Those Cousins of Mabel's," is very successful in depicting the character and career of a willful young country beauty who thinks her well-bred relatives very "fussy" about her behavior, and learns the wisdom of etiquette by various hard lessons. There are many other articles, pictures, and poems—with the rest an entertaining department called "The Contributors and the Children."

Wide Awake is but \$2.40 a year; 20 cents a number at your news stand. In this number is announced a series of ninety-four prizes for contributions suitable for publication in *Wide Awake*. The contribution may be an essay, story, anecdote, poem or humorous trifle. In total these prizes foot up \$2,000. D. Lothrop Company, Publishers, Boston.

Two of the little known religious communities in Pennsylvania—the Harmonites and the Moravians—will have their quaint customs and peaceful abodes described in illustrated articles in the next number of *The American Magazine*. As the Harmonites already light their village with natural gas, and the Moravians have deposited their antiquities in a museum, it would seem that the hand of Progress must ere long sweep away their distinctive features.

MR. KENNAN'S Siberian papers, illustrated by Mr. G. A. Frost, who accompanied Mr. Kennan on his trip through Asiatic Russia, will begin in the May *Century*. Their appearance has been deferred on account of the author's desire to group in preliminary papers—the last of which will be in the April *Century*—an account of the conditions and events in Russia directly related to the exile system. This system is now to be minutely described and elaborately pictured; and by way of preface to the first illustrated paper Mr. Kennan will, in a brief state-

ment, answer the question as to how he came to enter upon his arduous and somewhat perilous investigations, and why he and his companion were accorded such extraordinary facilities by the Russian Government itself. In the April *Century* Mr. Kennan will write of "The Russian Penal Code."

SOME idea of the excellence of *Harper's Magazine* for April may be gained by running one's eye down the column of names on the right-hand side of the table of contents, thus: F. A. Bridgman, William Black, Andrew Lang, Elizabeth Stoddard, Richard E. Burton, C. Coquelin, Joel Chandler Harris, Harriet Prescott Spofford, F. Anstey, Lafcadio Hearn, Charles Dudley Warner, George William Curtis, Charles King, U. S. A., and William Dean Howells. So much for the contributors. Another glance at the titles on the left will show the breadth of the field covered by the articles. The Great West has a liberal portion of space. Dramatic art is discussed by C. Coquelin in "Acting and Authors." The pictorial matter includes the work of Alfred Parsons, F. A. Bridgman, Frederick Barnard, Du Maurier, R. F. Zogbaum, Paul Renouard, C. S. Reinhart, and E. A. Abbey.

BRADSTREET'S of March 17, says: On June 30, 1887, in Dakota, there were 241 licensed grain elevators, having a storage capacity for 8,600,000 bushels of grain, besides which there are 265 grain elevators that have applied for licenses but had not completed their bonds, and 308 elevators that claim to do a private grain-storage business. The Port Arthur elevators and sheds had in the middle of February 414,000 bushels of wheat on storage, and the Fort William elevators and sheds 1,492,000 bushels of grain. The total storage capacity at the latter point is now 1,800,000 bushels. The Canadian Pacific road is to build another elevator of 750,000 bushels capacity, making an aggregate storage capacity of 2,550,000 bushels.

SCIENTIFIC METHODS.

Scientific methods bear the same relation to intellectual progress that tools, instruments, machines, mechanical contrivances—of all sorts, bear to material progress. They are intellectual contrivances—indirect ways of accomplishing results far too hard for bare-handed, unaided intellectual strength.

As the civilized man has little or no advantage over the savage in bare-handed strength of muscle, and the enormous superiority in accomplishing material results is due wholly to the use of mechanical contrivances or machines, even so in the higher sphere of intellect, the scientist makes no pretention to the possession of greater unaided intellectual strength than belongs to the uncultured man, or even perhaps to the savage.

The amazing intellectual results achieved by science are due wholly to the use of intellectual contrivances or scientific methods. As in the lower sphere of material progress the greatest benefactors of the race are the inventors or perfectors of new mechanical contrivances or machines, so also in the higher sphere of intellectual progress the greatest benefactors of the race are the inventors or perfectors of new intellectual contrivances or methods of research.

To illustrate the power of methods, and the necessity of their use, take the case of the method of notation, so characteristic of mathematics, and take it even in its simplest and most familiar form: Nine numeral figures, having each a value of its own, and another depended upon its position; a few letters, a and b, and x and y, connected by symbols, \times and $=$; that is all.

And yet, by the use of this simple contrivance, the dullest schoolboy accomplishes intellectual results which would defy the utmost efforts of the unaided strength of the greatest genius. And this is only the simplest

tool form of this method. Think of the results accomplished by the use of the more complex machinery of the higher mathematics!

Take next the method of experiment so characteristic, of physics and chemistry. The phenomena of the external world are far too complex and far too much affected by disturbing forces and modifying conditions to be understood at once by bare, unaided intellectual insight.

They must first be simplified. The physicist therefore, contrives artificial phenomena under ideal conditions. He removes one complicating condition after another, one disturbing cause and then another, watching meanwhile the result, until finally the necessary condition and the true cause are discovered. On this method rests the whole fabric of the physical and chemical sciences.—*Popular Science Monthly*.

GEO. H. CORLISS.

Geo. H. Corliss, the eminent mechanical engineer and manufacturer, died at his home Providence, R. I., Feb. 21, aged seventy-two years. It is said he never saw the interior of a machine shop until after he was twenty-five years old. He began the development of his famous steam engine at Providence in 1846, and two years later he gave to the world the essential features of the world-famed Corliss Engine. Mr. Corliss lived a quiet and retired life, devoting himself entirely to his invention, which has brought him medals of honor from various parts of the globe. He received the highest competitive prizes in the Paris exhibition of 1867, and in 1870 the late Dr. Asa Gray, as President of the Academy, presented him with the Rumford medals. Foreign builders exhibited engines of the Corliss type in the Vienna exhibition of 1873, which won for him the Grand Diploma of Honor, although he exhibited nothing and was not represented. The Institute of France awarded him the Montyon prize in 1878—the highest honor for mechanical achievement known to the world. Aside from these, medals from foreign potentates and societies have been sent the distinguished minister from time to time. His most notable exhibition was at the Centennial in 1876, when Mr. Corliss was the Commissioner for Rhode Island and one of the committee of seven in charge of the preliminary work. He finished the immense Centennial engine, and devised the system of power which set the whole of machinery hall in motion. It cost him \$100,000, but it was freely given, and stands as the most generous gift of an individual to an international exhibition.

A MERRY TIME.—The plumbers and steam fitters of Kansas City had a dance recently, and, from all accounts, enjoyed themselves hugely. Their programme of dances was elegantly printed, and the selection of music was appropriate. We give some of the numbers to show that the two trades or professions were able to select the music that suited them: "Kid, start your blower;" "Test your job;" "Is your solder hot;" "Put on the pump and gauge!" "Show your diamonds;" "Only a million \$;" "Wash your overalls;" "Where's the tongs?" "Make that joint tight!" "Make out the bill;" "Sixty cents an hour all around;" "We cannot reduce the bill;" "Who cut that pipe?" "Time to quit;" "Measure up the job;"—and others equally fit.—*The Master Steam Fitter*.

A NOVEL ELEVATOR ENTERPRISE.

The Scandinavian Elevator Company, recently organized by C. C. Wolcott & Co. and the Farmers' Alliances of Minnesota and Dakota, promises to cut an important figure in the wheat trade of the Northwest during the present season. The main object of the association, as set forth by those principally interested, is to prevent adulteration of the spring wheat of the Northwest, and in that way secure better prices in the Liverpool markets. It is claimed that under the present system of operations at Buffalo elevators, especially, the hard wheat of the Northwest and the soft grains of Kansas are mixed and then exported as Minnesota and Dakota No. 1 hard. As a result, the grades are reduced at the English warehouses, with a corresponding reduction in prices at the expense of the producers of the Northwest. The new elevator combination intends to send the hard wheat through to the Eastern or European markets without adulteration, and thus maintain the high standard of the grain. It is claimed that the farmers are backing the new scheme to the extent of their ability, and branch companies are now being formed in Dakota. A new line of thirty-one elevators will be in operation during the present season, and large transfer elevators will be built in this city and Duluth. With the backing and influence of the Farmers' Alliance this novel competitor for the grain trade of the Northwest threatens to create a lively interest in more than one quarter before the next crop begins to move.—*Pioneer Press* (St. Paul.)

WATER POWER AT NIAGARA.

The idea of using water the second time to produce additional power is not a new one, as set forth in the *Niagara Falls Gazette*. The practical advantage of it has been shown by the Niagara Wood Paper Company, and the scheme can be seen in operation at any time of the day or night. The plan was conceived by Stephen M. Allen, one of the builders of the Hydraulic canal, and was put in operation by Walter Jones, of the Niagara Wood Paper Company, who have used successfully for a long time the water drawn through their flume after it has passed through a turbine wheel in their pulp mill. The pulp mill wheel receives the water at a distance of 50 feet from the top of the bank. By means of a tunnel, which extends in a semi-circular form to the same level, the water is secured and saved from being wasted over the bank; it is then directed into a penstock south of the pulp mill where, 50 feet deeper, stands another turbine belonging to the paper mill. The same water is by this means used twice over and secures nearly double power, which is a gain of about \$30,000 to the company. The scheme has been in operation about two years, and is practically the idea as shown in the *Gazette*, with the exception that the water is free from ice troubles. Contractors say it is more practicable than an outside flume which might be injured by gathering ice. A prominent contractor states that he will build a tunnel from the Oneida Community to the Central mill for less money than he will build a flume exposed. The credit therefore of using water a second time from the canal basin belongs to the Niagara Wood Paper

**MILL AND ELEVATOR BUILDERS,
MILL FURNISHERS, MANUFACTURERS
OF AND DEALERS IN
MILL AND ELEVATOR
MACHINERY AND SUPPLIES. AN
AUTHENTIC BUYERS' GUIDE.**

Cards will be inserted under this heading in the "U. S. Miller," not exceeding three lines, copy of paper included, for FIVE DOLLARS per year. Additional lines, \$1.00 each per year.

Edw. P. Allis & Co., Milwaukee, Wis., builders of complete Flour Mills, manufacturers of Flour Mill Machinery, and dealers in Supplies of every description. [Mr. 89.]

Garden City Mill Furnishing Co., Chicago, Ills., Mill Builders, manufacturers of full line of Flour Mill Machinery, dealers in Mill Supplies, Bolting Cloth, etc., etc.

Jonathan Mills Mfg. Co., Cleveland, O., manufacturers of Milling Machinery, dealers in Mill Supplies, Bolting Cloth, etc.

Borden, Selleck & Co., 48 & 50 Lake st., Chicago, Ills., manufacturers of "HARRISON CONVEYOR" for Grain, Malt, etc., etc.

Haseltine Mill Furnishing Co., Minneapolis, Minn., manufacturers of "MCANULTY FEEDERS" for Rolls, etc., etc.

John C. Higgins & Son, 165 West Kinzie Street, Chicago, Ills., mfrs. of and dressers of Mill Picks. [Mr. 89.]

Faustin Prinz & Co., 659 East Water st., Milwaukee, Wis., manufacturers of Cockle Separators, Cylinders and Grain Cleaning Machinery.

Howes & Ewell, Silver Creek, N. Y., manufacturers Full line of Grain Cleaning Machinery.

James Leffel & Co., Springfield, O., manufacturers of Water Wheels, Engines, etc.

Poole & Hunt, Baltimore, Md., manufacturers of Steam Engines, Water Wheels, Flour, Corn, Paper, Saw and Cotton Mill Machinery.

W. J. Clark & Co., Salem, O., manufacturers of "SALEM" Elevator Buckets, etc.

Thornburgh & Glessner, 18-22 N. Clinton St., Chicago, Ills., manufacturers of Mill and Elevator Supplies.

R. C. McCulley, (P. O. Box 214) Lancaster, Pa., manufactures Cob Crushers, Cooper's Stoves, Castings, Patterns, etc. [Mr. 89.]

B. H. & J. Sanford, Phoenix Iron Works, Sheboygan, Falls, Wis., manufacturers of the "IMPROVED WALSH DOUBLE TURBINE WATER WHEEL." [Mr. 89.]

John C. Kilner, York Foundry and Engine Works, York, Neb., Mill and Elevator machinery of all kinds, Engines, Boilers, Pulleys, Shafting, etc. [Mr. 89.]

The Gutta Percha and Rubber Mfg. Co., 159-161 Lake st., Chicago, Ill., Belting and Rubber Goods. [Mr. 89.]

The Avery Elevator Bucket Co., sole owners and manufacturers of Seamless Steel Elevator Buckets, cor. Wason, Lake and Dart sts., Cleveland, Ohio. [Mr. 89.]

Richmond Mfg. Co., Lockport, N. Y., manufacturers of Grain Cleaning Machinery, Bran Dusters, etc. [Mr. 89.]

Company, who have it in operation at the present time.

The writer has heard various plans discussed for this purpose, among which as the one now announced as a great discovery, but which was discarded by the Niagara Wood Paper Company several years ago as being inferior to the one adopted by them. There is no doubt but that an immense power that is now going to waste could be utilized by securing the overflows of the different mills and concentrating them in a sub-canal; the proof has been shown by a practical illustration, but parties who have demonstrated the practicability object to giving the credit to other persons and having it called a new plan for utilizing the water power of the canal basin.—*Buffalo Commercial Advertiser*.

**A LARGE FLOUR MILL MANUFACTORY TO BE
BUILT AT ONCE.**

A dispatch from Escanaba, Mich., dated March 19, says: The establishment of the Cochrane Flour Mill Manufactory at this place

**Prominent Flour, Grain and Provision Brokers,
desiring correspondence with Millers
of Wheat, Rye and Buckwheat Flours, and
Cornmeal and Corn Products, with a view
to Trade.**

Cards will be inserted under this heading in the "U. S. Miller," not exceeding three lines, copy of paper included, for FIVE DOLLARS per year. Additional lines, \$1.00 each per year.

S. P. Thompson & Co., 218 Patterson st., Baltimore, Md. Flour and Grain Commission.

Magor Bros. & Co., Produce Exchange, New York, Shipping and Commission, Flour, Grain and Provisions.

**MILLERS AND MANUFACTURERS OF
WHEAT, RYE AND BUCKWHEAT
FLOURS, AND CORN MEAL AND
CORN PRODUCTS, (WITH NAMES
OF SPECIAL "BRANDS" MADE) DE-
SIRING CORRESPONDENCE WITH
SOLID HOUSES WITH A VIEW TO
TRADE.**

Cards will be inserted under this heading in the UNITED STATES MILLER, not exceeding three lines, paper included, for FIVE DOLLARS per year. Additional lines, \$1.00 each per year.

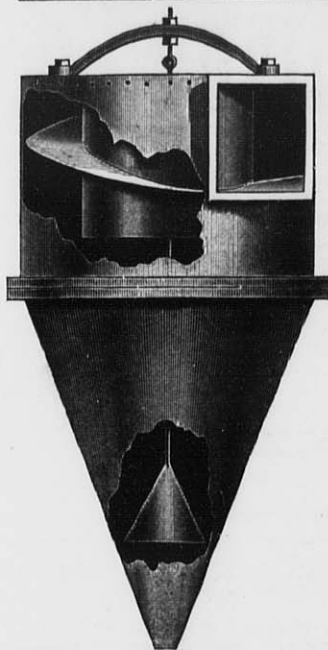
John Smith & Co., Banner Roller Mills, (steam power) Milwaukee, Wis., Daily capacity 150 barrels. Brands: "Seaside," "Beau Ideal," "Chestnut," "Red Cross."

is a settled fact, and work on a \$50,000 building will be commenced as soon as practicable. The mills will be in operation by August 1. At a mass meeting a forty-acres tract of land was donated, and citizens subscribed \$30,000 in stock, while Lieut.-Gov. J. H. McDonald, of this city, and Wm. Cochrane of Washington, D. C., the patentee, took, equally divided, \$370,000, making the capital stock \$400,000. The establishment is for the manufacture of new flour mill machinery which increases the production fully one-third with less power and same mill capacity, while the wheat yields 10 to 15 per cent. more bran, making a higher grade of flour. But one mill is now operating, and that in Canada. From 500 to 600 employes will be given employment.

**Guaranteed Circulation for
March and April, 10,000
copies each month.**

VORTEX DUST COLLECTOR

· GREAT · SUCCESS ·



Guaranteed not to Infringe ON ANY OTHER Dust Collector Patent

NOTICE! ————— ❧

TO WHOM IT MAY CONCERN: We, the undersigned, give notice that we have transferred to the Vortex Dust Collector Co., of Milwaukee, Wis., all our right, title, interest and good will in and to our Dust Collector business, heretofore carried on in Indianapolis, and they will hereafter be the sole manufacturers of the "Vortex." Mr. Eugene Bretney, our President and Manager, will superintend the manufacture of said machine in the future.

THE BRETNEY DUST COLLECTOR CO.

THIS is undoubtedly the best machine on the market for Purifiers, Grain Cleaners and Elevators, or in connection with any dust producing machinery, and we respectfully solicit from our milling friends and the trade generally a share of the Dust Collector trade.

TESTIMONIAL.

INDIANAPOLIS, IND., Feb. 16, 1888.
To whom it may concern: This is to certify that we have in our two mills twenty Vortex Dust Collectors, manufactured by the Bretney Dust Collector Co. We are very much pleased with the working of them in our mills. We have tried them thoroughly. At first we put in a few, until we now have twenty on our purifiers and wheat cleaning machinery. Too much cannot be said in their praise.

ACME MILLING CO.

By S. F. ROBINSON, Pres.

ADDRESS

SPECIAL SIZES built for ELEVATORS and WOOD-WORKING MACHINERY Apply for Prices before Purchasing elsewhere.

No Power! No Attention! No Clogging!
Perfect Ventilation! Low Prices!

VORTEX DUST COLLECTOR CO., MILWAUKEE, WISCONSIN.

Important Notice!

MANUFACTURERS

KURTH'S
COCKLE
SEPARATOR

THE GILBERT
BOLTER

THE MORGAN
SCOURER

MILWAUKEE
CENTRIFUGAL
ASPIRATOR

MILWAUKEE
SPIRAL
CONVEYOR

We are Prepared to furnish **STEEL**
or Zinc Cylinders for

KURTH'S PATENT IMPROVED COCKLE SEPARATOR

As required, and solicit orders for repairs as well as for new machines.

Please favor us with a share of your patronage.

.. READ ..

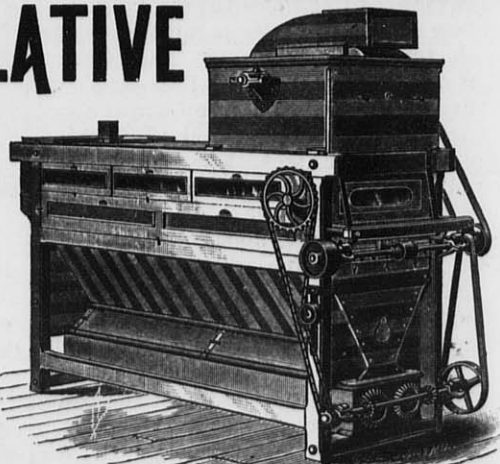
Pillsbury A Mill, Minneapolis, Feb. 13, 88.
To Cockle Separator Mfg. Co., Milwaukee, Wis.
Gents: In regard to your latest improved rolling screen Cockle Machine, we would say we like them very much. The eight we have put in are doing first-class work and we consider them the best cleaning machines we have.

C. G. HOYT, Head Miller.
HIRAM SNYDER, Second Miller.

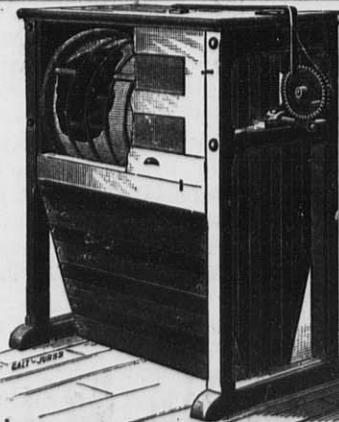
ADDRESS

Cockle Separator Manufacturing Co.
MILWAUKEE, WIS.

SUPERLATIVE PURIFIER BEST IN THE WORLD



VERY LOW PRICES on Both THESE MACHINES



Superlative Bran Duster AND DISINTEGRATOR.

Undoubted Satisfaction.
Perfect Construction.
SEND FOR CIRCULAR.

ADDRESS, SUPERLATIVE PURIFIER MFG. CO., MILWAUKEE, WIS.

The Jonathan Mills Manufacturing Co.

MANUFACTURERS OF

SPECIAL FLOUR MILL MACHINERY.

WE SHALL MAKE THE **Jonathan Mills Universal Flour Dresser** OUR LEADING SPECIALTY.

THIS Machine has built for itself a National Reputation solely through its Superior Merits, and stands to-day a Peer to everything in the bolting line, not alone in **Flour Milling** but for **Buckwheat, Corn Meal, Electric Carbon, Dry Lead for Paints, Salt, Sugar, Foundry Facings, Ground Bone and Soapstone.**

We carry a full line of **Heidegger & Co.'s** Celebrated **Crown Silk Anchor Bolting Cloths and Grit Gauzes.** These Cloths are famous the world over for their great strength and evenness of count.

We have the most experienced cloth makers, and can insure you as good making up of your cloth as can be made anywhere. GIVE US A TRIAL ORDER.

The Empire Manufacturing Company furnish us with White Special Webbing that is very strong, pliable and much less elastic than colored webbing or ticking. By favoring us with your cloth orders for any style of Reel or Purifier, you can rely on getting Superior work at satisfactory prices.

We also furnish the very best **Wire Scalping Cloths** made up to fit any kind of Reel.

We shall at once issue a forty or fifty page pamphlet that will interest every one in the Milling business.

WE EARNESTLY SOLICIT YOUR CORRESPONDENCE AND TRADE. ADDRESS

The Jonathan Mills M'f'g Co., Cleveland, Ohio.

THE NEW POSTAL RULES.

Congress has given relief to the recent interpretation of the postal law in regard to third and fourth class matter, as rendered by ex-Postmaster General Vilas, and has so amended the law that the construction cannot be perverted so as to give such annoyance, inconvenience and loss as has been occasioned in the recent past. Postmaster General Dickinson has issued a circular, based on the new law, which went into effect on the 20th inst., in which the following appears, covering matters of interest to the general public:

Third-class matter.—On matter of this class, or on a tag, or label attached, the sender may either write or print his own name, occupation, and residence or business address, preceded by the word "from," and may make marks (other than by written or printed words) to call attention to any word or passage in the text, and may correct any typographical errors. There may also be placed upon the blank leaves or cover of any book or other matter of this class a simple manuscript dedication or inscription not in the nature of personal correspondence. There may also be placed upon the envelope, wrapper, tag, or label of matter of this class any printing that is not in its character unavailable as third-class matter, provided there be kept sufficient space for a legible superscription and the necessary postage stamps.

Fourth-class matter.—With matter of this class, properly prepaid as such, the sender may inclose third-class matter; and he may write or print upon the cover, wrapper, or label thereof his name, occupation, residence or business address, preceded by the word "from," and any marks, numbers, names, or letters for the purpose of description. He may also print upon the same anything that is not unavailable as printed matter, and that is not in the nature of personal correspondence, provided there be left sufficient space for a legible superscription and the necessary postage stamps.

From the above it will be seen that the restrictions as to writing upon matter of the third and fourth classes are substantially the same as under the old law; but that in general all restrictions as to printing on these two classes are removed, except as to the reservation of space necessary for addressing the matter and the placing thereon of postage stamps.

In all cases directions for transit, delivery, forwarding, or return shall be deemed part of the address.

EDUCATION AND WORK.

Many persons believe that under the present system of education young people are acquiring a distaste for manual labor, and that there is, consequently, danger that the trade and agricultural occupations will be deserted by all but the most inefficient classes of workmen. Much of the experience of the English and American society is in favor of this view, and the tendencies in France appear to be in the same direction. As an offset to what may be said in favor of it, *The London Spectator* directs attention to the fact that no dislike of work, even of the roughest character, has appeared among two of the best educated races. The Scotch, who have been taught for two hundred years, and are now more thoroughly trained than English national schoolboys, show no disposition to avoid labor, but are remarkable for persistent and fairly contented industry. The Prussian peasants, "who are as educated as the English will be twenty years hence, work exceed-

ingly hard, and in the country where their holdings are their own, show none of the resentment at their fate which is manifested in the towns in the form of socialist aspirations." Gardeners who all over Great Britain are the best instructed of manual laborers, work, more especially when working for themselves, with unusual diligence; and it is a matter of constant observation that a laborer who happens by any accident to be a "bit of a scholar," can be depended upon when work presses and every man is required. The people of Rome who can read and write, are far more diligent than the Neapolitans, who can not; and the best workmen in Italy are those who have passed through the army, and so obtained what is practically an education. There seems to be no *a priori* reason why it should be otherwise.

GLASS MILLSTONES.

Glass millstones consist usually of eight sections of glass fastened together by the use of strips of wood, nine millimetres wide to which the glass is cemented. After cementing the parts together a piece of wood three centimetres broad and one thick is cemented about the outer circumference of the stone reaching to its entire height. This increases the cohesion of the stones and makes the attachment of the outer iron hoop more easy. This iron hoop is fastened by means of fifty wooden screws to the wooden hoop, about five millimetres below the grinding surface, and in such a manner as to admit of easy removal without breaking. The eye of the stone, as well as the indirect grinding surface, consists of pure cement. A ring in the aperture at the centre insures durability and strength at that point. The glass grinding surface has a mild grip of roughness which it never entirely loses. A dress is employed similar to that used on sweetwater quartz stones, and the glass stones must be dressed as carefully and often as French stones though the work is easier. Those who think the surface will hold ten to fifteen years without dressing are laboring under a great mistake.—*Berliner Mueller Zeitung*.

HOW SOME FRENCH BREAD IS MADE.

One summer's day we stopped to call at the stone farm-house of Monsieur Duval. Ernestine, the eldest daughter, was housekeeper in her dead mother's place, and she it was who brought out the amber-colored cider, the goat's cheese, and the heavy, hard, country bread. It is an essential of French peasant hospitality to offer these things to visitors.

The loaf she took from the shelf was one of half a dozen leaning against the black wall. These loaves resembled cart wheels, and had been baked in six-quart milk pans. Ernestine cut the loaf with a small saw made for the purpose! Nothing less than such a saw, or a pirate's cutlass, could sever that homely but wholesome *pain rassis*.

These loaves, we knew, were baked only once a month. Bread day in a Norman peasant family is like washing day on an American farm, in the respect that it comes at regular periods. We judged that bread day in this cottage was approaching, from the fact that only six loaves remained of the original thirty or thereabout.

After our luncheon Ernestine took us through the orchard to a picturesque stone

building, where the bread was wont to be made. This building had once been part of an ancient abbey, and amid its ivy-covered ruins we could still trace fine sculpture and bits of armorial designs, but inside there was no trace of art or architecture. It was really a Norman hen-house. We saw several pairs of *sabots* or wooden shoes hanging from the wall and looking as if they had been white-washed.

In one corner of the place was a large space inclosed with boards. This was empty, but like the *sabots*, it suggested whitewash or mortar making.

Ernestine told us that this was the family dough trough. Hither, once a month, came her father and the hired man to "set" the yeast-a-rising. Flour and water were stirred together with the huge wooden spades shaped like our snow-shovels, which hung with the *sabots* upon the wall. When the mass, thoroughly beaten together, had risen and assumed a dark color and leathery consistency, then came the tug of war. The two men put on the *sabots* over their ordinary shoes, jumped in upon the dough, and began the kneading. Their way was to hop and prance and flourish like opera dancers, to stamp and kick like horses, exerting themselves till the perspiration streamed off them and they had no strength left. After this process the dough was put into the pans, and then baked in the huge oven at the rear of the abbatial hen house.

In all Norman towns half-clad men may often be seen lounging about bake-house doors. Their legs and feet are bare and floury, and as they tread the streets we know that they have just come from or are returning to their usual occupation of kneading bread.

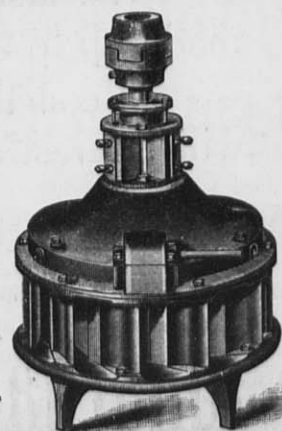
"*Mon Dieu!*" exclaimed Ernestine when we told her that in America bread making was woman's work. "*Mon Dieu!* how cruel your men are! I would rather shoe horses!"

—*Epoch*.

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THE PRODIGAL SON.

[The following soul stirring (?) poem was recently sent to the UNITED STATES MILLER, with the suggestion that we print it for the amusement of our readers and especially to place it before the celebrated LODGE OF ELKS in Milwaukee at a Social Session. The lines are to be sung to the air of "When Johnny comes Marching Home." If you don't think there is some fun in it, get a dozen or two of "the boys" together and sing it.]

I.

There was an old man, the story runs,
There was, there was;
The father of two goodly sons,
He was, he was.
He lived on a ranch, so said the Psalm,
Somewhere near the old Jerusalem,
The vicinity does not matter a—hem,
It don't, it don't.

II.

Now, one of the sons was a nice young man,
He was, he was;
Got up on the slickest and toniest plan,
He was, he was.
He was kind to his mother and sweet on his dad,
Was always good-natured and never got mad;
In fact, was a darling, a dude of a lad,
He was, he was.

III.

The other young man was a son-of-a-gun,
He was, he was;
He went with a gang of which he was one,
He did, he did.
He wore a loud necktie and a high standing collar,
Played keno and faro, got drunk and did holler;
In fact, was a youth of the kind tra-la-la,
He was, he was.

IV.

The old man's purse was big and fat,
It was, it was;
And the prodigal son got his eye on that,
He did, he did.
And the good young man, with his simpering smile,
Also had his eyes on the old man's pile,
And hoped to come in for his share after awhile,
He did, he did.

V.

On the square divide the old man did his best,
He did, he did;
And the "prod" took his share and lit out West,
He did, he did.
He got drunk with the boys and had a high old time,
Awoke next morning with nary a dime,
Sick and from home, in a foreign clime,
Alas! Alas!

VI.

The telegraph man in his office sat,
He did, he did;
When in dropped a tramp, without any hat,
There did, there did.
Said he, "Just wire along the track,
To the old folks at home,
The 'prod's' coming back, and order a calf for one on
the rack,"
He did, he did.

VII.

So he turned up, with his lawyer, one day,
He did, he did;
Sued his dad and his brother for time while away,
He did, he did.
He got judgment and kicked the old folks out.
That's the kind of a "prod" I sing about,
That's the kind of a "prod" for whom we shout;
It is; hurrah!

ITEMS OF INTEREST.

P. D. Armour & Co. are reported to have done \$60,000,000 worth of business during '87.

American mining properties produced \$103,000,000 during 1887, about 30 per cent. of which is estimated to be clear profit.

The Ways and Means Committee estimate that the Mills bill now under consideration in Congress will make a total reduction on import duties of about \$53,000,000.

Carroll D. Wright, chief of the labor bureau, Washington, reports that in the last six years there have been 3,903 strikes, less than half of which were successful, with a loss to the strikers in wages of \$51,819,165.

Any mechanic can do his work quicker and better if he thoroughly understands it, and other things being equal, the man who understands it the best will be the one who also understands draughting. It is by education that we must endeavor to raise the standard of our draughtsmen and mechanics, and make them both more practical.

In regard to the people carrying checks in their pockets for some time before depositing them in banks, Judge Biddle, of Philadelphia, says: The rule is that where the parties all reside in the same place the holder should present the check on the day it is received, or the following day, and when payable at a different place from that in which it is negotiated, the check should be forwarded by mail on the same or next day for presentation. If this is not done, the risk of the solvency of the drawee is upon the payee.

Henry C. Spalding, the inventor of "Spalding's glue," and who was at one time worth \$80,000, died in Blockley almshouse, Philadelphia, a few weeks ago, at the age of 63 years. He came from Boston many years ago and invented a special kind of coach varnish, a waterproof fluid for lining casks and barrels, and several other things of considerable commercial value. He met with financial successes with his inventions, but soon took to drinking, which finally resulted in his ruin. He was admitted to the Philadelphia Hospital on January 20 last suffering from typhoid pneumonia. An only daughter in Boston survives him.

A striking instance, which illustrates the reign of necessity in the adjustments of physical elements, occurred some years ago at Revere, Mass. Rev. Thomas E. Barr, in his philosophical work for young students, entitled "The Gist of It," tells the story:

The Beverly express ran into the Bangor accommodation as it stood at the station, passing half way through one car before it stopped. The engineer was arrested and tried for manslaughter. He affirmed that he was running on schedule time, fifteen miles an hour; the prosecution charged that he was running thirty miles an hour. The weight of the express was furnished to one of the professors in the Massachusetts Institute of Technology, who calculated the momentum of the train and the inertia of the car, and found that the momentum at fifteen miles an hour would be just enough to carry the express half way through the car. At thirty miles an hour the momentum would have carried it four times as far. The engineer was of course at once released.

A reliable cement, one that will resist the action of water and acids, especially acetic acid, is: Finely powdered litharge, fine, dry white sand and plaster of Paris—each three quarts by measure—finely pulverized resin one part. Mix and make into a paste with boiled linseed oil, to which a little dryer has been added, and let it stand for four or five hours before using. After fifteen hours' standing it loses strength. The cement is said to have been successfully used in the Zoological Gardens, London.

A well known steam engine builder says that a large share of the fault found with engines running unsteadily comes from permitting the governor to get dry from lack of oil, or gummed up in some of its essential parts.

He instances sending a man 150 miles upon repeated complaints of an engine sold two years previous. A half day spent in putting the governor in condition was all the man did when he got there. Another frequent trouble with the governor run by a belt is from belt slippage, or the edge of the belt may pull hard against one of the flanges of the pulley. In either case there need be no expectation of regular speed. If close regulation is expected a steam engine governor should be kept in as good condition as a watch.—*American Machinist.*

I have been asked the question, "Does friction increase with speed, or decrease?" Both. Where the speed is slow, increasing it may decrease the friction per turn; but where the speed is fast, it may be found that increasing speed increases the friction per turn also. There are two sides to almost every question, and particularly so in this case. The more viscous the lubricant, the greater pressure can be carried upon the bearing.—*Grimshaw.*

Drop oil is collected in many mills and factories to be cleaned and used again. A little apparatus has been constructed for this purpose, which, it is reasonable to suppose, is patented. It may be described as follows: The apparatus is a box-like concern, of several "stories," the interior either lined with, or else consisting entirely of, lead. Above it has a shoulder like a funnel, into which is poured the oil to be cleaned. The purified oil passes off through an escape pipe in the bottom. The different shelves or "stories" are perforated, and covered to a height of about two inches with raw, loose cotton, through which the oil must percolate. The cotton serves as a filter, and retains all kinds of contaminations. After the oil has in this manner passed through the several shelves, it is nice and clean and drops into a vessel underneath. The dirty cotton is occasionally replaced by clean. This is about the most inexpensive way of effecting it that I know of. It is also necessary to add that the apparatus must stand in a warm place. The cleaning of the oil with chemicals is both a tedious and a doubtful process, because even after thorough washing it may still retain traces of acids, rendering it unfit for lubricating purposes.

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A lawyer who refuses a fee because his client is poor.

A woman who is tongue-tied.

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A woman die of the lockjaw.

A young lady who is scrawny, compliment another on her form, if she happens to be well-built.

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